US Department of Energy
Office of Packaging and Transportation

Transportation Outreach Newsletter

Vol. 1, No. 18 July 2009

Moab Uranium Mill Tailings Remediation

Infrastructure improvements at Moab, Utah, have been completed and, on April 20, 2009 the first rail shipment of mill tailings from the Atlas Mill site was delivered to the Crescent Junction disposal cell. This shipment was placed in the disposal cell on April 21, four weeks ahead of schedule. The first shipment was made by 22-car train, with each car carrying 4 steel waste boxes containing tailings. During the first week of operation, 6,390 tons of tailings were transported. As of July 9, over 124,000 tons have been shipped. Based on availability of funding from the American Recovery and Reinvestment Act of 2009 (ARRA), the Moab Project is planning to accelerate its schedule by making daily shipments using 34-car trains. POC is Ashok Kapoor at: ashok.kapoor@hq.doe.gov 202-586-8307

The First ARRA Funded Mixed Low Level Waste Shipment Leaves Idaho

On May 6, 2009, a shipment of mixed low-level waste left DOE's Advanced Mixed Waste Treatment Project, years earlier than originally planned, due to funding received through the American Recovery and Reinvestment Act of 2009 (ARRA). The 36.5 cubic meter shipment consisted of radioactive and chemically contaminated waste that had been retrieved, characterized, packaged and shipped from DOE's Idaho site. It will be treated and permanently disposed in a commercial disposal facility in Utah. ARRA funds for the Advanced Mixed Waste Treatment Project are being used to accelerate the shipment of an additional 800 cubic meters of mixed low-level waste by Sept. 30, 2009.

TEPP Drill Conducted at Joint Emergency Services Training Center in Zachary, LA

On June 24, 2009, a Transportation Emergency Preparedness Program (TEPP) drill was conducted in Zachary, Louisiana, at the Joint Emergency Services Training Center (JESTC). The JESTC, operated by the Louisiana State Police, trains the state's hazardous materials team.

The drill was the culmination of two MERRTT Train-the-Trainer sessions conducted on April 28-29 and June 22-23. Classes were attended by members of the Louisiana State Police; Oil Mop (a hazardous material clean-up company that contracts with various states and industries to clean up hazardous material spills), Zachary Emergency Medical

Services, the Zachary Police Department, and a local volunteer firefighter. The scenario for the drill involved a multiple vehicle accident with damaged radioactive material packages. A delivery vehicle carrying radiopharmaceutical materials in Type A packages ran into a second vehicle, causing three radioactive material packages to be ejected from the vehicle. A Type B package containing a radiography camera remained undamaged in the back of the vehicle. To simulate the accident site, one damaged vehicle was towed to the site (staged at JESTC), and a second vehicle was driven next to it to simulate the delivery vehicle. Shipping papers were placed in the delivery vehicle, and mock-up Type A and B packages were placed at the scene. One instructor role-played an injured and potentially contaminated victim, while a second instructor portrayed the driver of the delivery vehicle.

Students worked as a group to make decisions and complete response actions for the entire event, including:

- Establishing incident command;
- Hazard recognition and scene size-up;
- Making notifications;
- Determining protective actions;
- Initial response actions, including victim rescue, patient/ packaging (gross decon), transfer of a contaminated patient to EMS; scene reconnaissance; and shipping paper retrieval
- Decontamination corridor planning and operations;
- Hazmat operations (including instrument operations, scene surveys and mapping), and;
- Recovery planning considerations

Instructors corrected student mistakes on the spot, and offered suggestions as the students made decisions and took actions. Student feedback from the training and drill was positive.

“I’m glad we came back for the drill,” said one of the students from Oil Mop, who attended MERRTT in April. “It refreshed everything we learned during training, and put everything in perspective so that the response makes sense now. If there were an event tomorrow involving radioactive material, I would be comfortable in our response role.” POC is Ella McNeil at: ella.mcneil@hq.doe.gov , 301-903-7284

Cleanup at the Oak Ridge Reservation – Using RFID Technology to Optimize On-Site Waste Shipping Processes

Of the 2.4 million cubic yards of waste forecasted for generation over the life of environmental clean-up activities on the Oak Ridge Reservation, 2.1 million cubic yards are planned for shipment to the Environmental Management Waste Management Facility (EMWMF) and compacted to approximately 1.5 million cubic yards when disposed. The volume shipped to the EMWMF was estimated to be the equivalent of more than 150,000 truck loads logging over 2 million miles. Truck access to the EMWMF was originally considered to be by existing public and restricted-access roadways. Local route traffic studies indicated traffic rates as high as 15,000 vehicles per day on the public route.
Alternatives were evaluated to determine the best method to effectively transport this waste and to protect the workers, public, and environment. A dedicated haul road was selected as the most feasible option for safest disposition of the waste. The haul road opened in 2006.

A major effort in continuing the cleanup efforts at the East Tennessee Technology Park (ETTP) is the demolition and disposal of the massive K-25 building, which consists of 44 acres under one roof. The former K-25 site began operations during World War II as part of the Manhattan Project. Its original mission was to produce enriched uranium for use in atomic weapons. The plant was permanently shut down in 1987 and is undergoing cleanup for ultimate conversion to a private sector industrial park. Restoration of the environment, decontamination and decommissioning of facilities, and disposition of wastes are currently the major activities at the site. The K-25 project is expected to generate more than 30,000 truckloads of waste for disposal.

Due to the large number of shipments planned to the EMWMF and to assure the project schedule for waste shipments from the K-25 Decommissioning and Demolition Project could be met, optimization of the waste shipping process was essential. The Oak Ridge contractor, Bechtel-Jacobs, conducted a transportation study and determined each waste shipment required completion of eight paper forms, and trucks idled while

waiting for completion of the paperwork. Also, additional truck idle time was spent completing the truck inspection process

A Radio Frequency Identification **(**RFID) tagging system was installed to monitor the waste trucks transiting the haul road. By using RFID technology, paperwork is reduced or eliminated while maintaining an equivalent level of safety required by DOE directives. Shipping productivity is increased by reducing the cycle time associated with all shipments. Also, weigh-in-motion (WIM) and radiation detection portal monitors (RPM) have been deployed to provide safety and security data. Shipping data, including the vehicle identification and tare weight of the shipment is written to an RFID Tag which may be queried in route by RFID read-stations. The system provides real-time data tracking and truck movement visibility; and enables automated reporting of shipments.

RFID technology allows for the collection of comprehensive data that can be used to monitor driving behavior and optimizes transportation processes; provides real-time monitoring of shipments to reduce bottlenecks at loading stations, weight scales, and dump ramps; and the reuse of passive RFID Tags. It has eliminated the need for the creation of three physical shipping documents, which eliminates the potential for errors associated with manual data entry; eliminated the handling and filing of paperwork associated with waste transportation forms (>250,000 shipping documents); and saves an estimated 25 minutes of cycle time per truck, per shipment. Since March 2009, over 5,600 shipments have been safely and efficiently completed.

MERRTT Training Schedule

Date	Location	Activity
July 20-21	Pueblo, CO	Train the Trainer
July 30-31	Knoxville, TN	Train the Trainer
August 4-7	Bluffton, SC	8-Hr MERRTT
August 5-6	Silver Spring, MD	Train the Trainer
August 11-12	Provo, UT	8-Hr MERRTT
August 11-13	Bluffton, SC	8-Hr MERRTT
August 18-19	Meridian, MS	16-Hr MERRTT
August 20-21	Vicksburg, MS	16-Hr MERRTT
September 15-17	Cheyenne, WY	Train the Trainer
September 16-18	Groton, CT	Train the Trainer
September 28-30	Lincoln, NE	8-Hr MERRTT
November 17-18	Charlotte, NC	Train the Trainer

For additional information please contact Ella McNeil at: Ella.McNeil@hq.doe.gov , 301-903-7284

Transcaer Whistle-Stop Tour

The Norfolk Southern Railway will conduct its Whistle Stop Tour, beginning on September 22, 2009 in Buffalo, NY, and stopping in Cleveland, OH (Sept 23), Toledo, OH (Sept 24), Columbus, OH (Sept 25) and ending in Charleston, WV (Sept 26).

As in the past six years, the Transportation Emergency Preparedness Program (TEPP) will again partner with Norfolk-Southern on the Whistle Stop Tour to provide training, education, and outreach on DOE radiological shipments. The Whistle Stop Tours are designed to increase community understanding of the importance of emergency planning, and to provide local emergency response groups an opportunity to receive some hands-on training and discuss additional training needs. The tour provides an opportunity to help emergency responders to discuss transportation related topics. For additional information and a brochure, visit www.transcaer.org on the web.

For additional information, contact the Office of Packaging and Transportation:

Stephen O'Connor, Director	stephen.o'connor@hq.doe.gov	301-903-7854
James Shuler, Packaging Certification Program	james.shuler@hq.doe.gov	301-903-5513
Dottie Brown	dorothy.brown@hq.doe.gov	301-903-4925
Julia Donkin	julia.donkin@hq.doe.gov	301-903-5283
Eric Huang	eric.huang@hq.doe.gov	301-903-4630
Ashok Kapoor	ashok.kapoor@hq.doe.gov	202-586-8307
Prakash Kunjeer	prakash.kunjeer@hq.doe.gov	301-903-2443
Ella McNeil	ella.mcneil@hq.doe.gov	301-903-7284
Bill Spurgeon	william.spurgeon@hq.doe.gov	301-903-8187
Mike Wangler	mike.wangler@hq.doe.gov	202-586-7976